

What is claimed is:

1. An apparatus for casting a vehicle wheel component comprising:  
a multi-segment mold for the vehicle wheel component; and  
a device for vibrating a portion of said mold while said mold contains a charge

5 of molten metal and continuing to vibrate said portion of said mold while said charge  
of molten metal solidifies.

2. An apparatus according to claim 1 wherein said device for vibrating  
includes a ball vibrator.

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3. An apparatus according to claim 2 wherein said mold includes a top core  
and further wherein said ball vibrator is mounted adjacent to said mold and is operable  
to vibrate said top core.

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4. An apparatus according to claim 3 wherein said ball vibrator is  
pneumatically powered.

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5. An apparatus according to claim 4 wherein said mold forms a one piece  
vehicle wheel.

6. An apparatus according to claim 4 wherein said mold forms a full face  
wheel disc.

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7. An apparatus according to claim 1 wherein said device for vibrating  
includes a reciprocating hammer.

8. An apparatus according to claim 7 wherein said mold includes a top core  
and further wherein said reciprocating hammer is mounted adjacent to said mold and  
is operable to vibrate said top core.

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9. An apparatus according to claim 8 wherein said reciprocating hammer is pneumatically powered.

10. A method for forming a vehicle wheel component comprising the steps  
5 of:

(a) providing a multi-segment mold for casting the wheel component and a device for vibrating a portion of the wheel mold;

(b) filling the cavity of the wheel component mold with a charge of molten metal;

10 (c) vibrating a portion of the wheel component mold while the molten metal solidifies; and

(d) removing the wheel component from the mold.

11. The method according to claim 10 wherein during step (c) the portion of the mold is vibrated while the mold cavity is filled with the molten metal.

12. The method according to claim 10 wherein the portion of the mold is vibrated in step (c) after the mold cavity is completely filled.

20 13. The method according to claim 10 wherein the portion of the mold is vibrated in step (c) after a predetermined time period has elapsed following the filling of the mold cavity.

25 14. The method according to claim 10 wherein during step (b) the molten metal is poured into the mold cavity with gravity causing the molten metal to flow throughout the mold cavity.

30 15. The method according to claim 10 wherein during step (b) the molten metal is forced under pressure into the mold cavity with the pressure causing the molten metal to flow throughout the mold cavity.

16. The method according to claim 14 wherein the mold forms a one piece vehicle wheel.

5 17. The method according to claim 14 wherein the mold forms a full face wheel disc.

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